UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/532,894	03/22/2000	Masataka Mitama	11P083162	8017

21254 7590 05/07/2003

MCGINN & GIBB, PLLC
8321 OLD COURTHOUSE ROAD
SUITE 200
VIENNA, VA 22182-3817

EXAMINER	
NGUYEN, THUAN T	
ART UNIT	PAPER NUMBER
2685	6

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.

EXAMINER	
ART UNIT	PAPER NUMBER
	6

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

See Attachments

PR4

Office Action Summary

Application No.	Applicant(s)
09/532,894	Mitama
Examiner	**Art Unit**
Thuan Nguyen	2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-3 and 5-15* is/are rejected.

7) ☒ Claim(s) *1, 2, 4, 8, 10-12, and 14* is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *Mar 22, 2000* is/are a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). *3-5*
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> *The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.*

2. Claim 1 recites the limitation "**the** transmission system" in the claim language. There is insufficient antecedent basis for this limitation in the claim.

3. Claim 5 recites the limitation "**the** detachable **module**" in the claim language according to claim 1, but it does not exist any "module" therein. There is insufficient antecedent basis for this limitation in the claim.

4. Claim 8 recites the limitation "**the operation** of the transmission function ..." in the claim language. There is insufficient antecedent basis for this limitation in the claim.

5. Claim 10 recites the limitation "**the operation** of a received signal mixing portion, ... " in the claim language according to claim 8. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 11 recites the limitation "**one** of **a plurality of transmission function units** ..." in the claim language according to claim 8. There is insufficient antecedent basis for this limitation in the claim because claim 8 refers to only a transmission function unit.

7. Claim 12 recites the limitation "**the operation** of the receipt processing unit ... " in the claim language according to claim 8. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 15 recites the limitation "**the** received signal..." in the claim language according to claim 8. There is insufficient antecedent basis for this limitation in the claim.

9. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim Objections

10. Claim 1 is objected to because of the following informalities: "a detachable transmitting function" should be added --part-- right afterward in order to clearly identify the portable phone set comprises that detachable part and "transmitting and receiving circuits", and as later it being referred to as "a transmitting function part" in the claim. Appropriate correction is required.

11. Claim 2 is objected to because of the following informalities: the term "a modulator output analog signal" should be corrected as either "a modulating output analog signal" or "a modulated output analog signal" for it to make sense and to distinguish it from "a modulator" device itself (as in claim 4 afterward). Appropriate correction is required.

12. Claim 4 is objected to because of the following informalities: --wide-band synthesizer-- should have --a-- in front of it. Appropriate correction is required.

13. Claims 8 and 10 are objected to because of the following informalities: --a receipt function unit-- should be corrected as either -- a receive function unit-- or --a receiving function unit-- as commonly used in the art. Appropriate correction is required.

14. Claim 11 is objected to because of the following informalities: "... mounted to the body" should be inserted "of the portable telephone set" afterward for the sentence makes sense.

15. Claim 12 is objected to because of the following informalities: --the receipt processing unit-- should be corrected as -- the receive processing unit-- as commonly used in the art. Appropriate correction is required.

16. Claim 14 is objected to because of the following informalities: the predetermined software is --defied-- should be corrected as -- defined-- as mistaken used as a typo. Appropriate correction is required.

Allowable Subject Matter

17. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and an appropriate correction as noted above.

18. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or suggest a software portable telephone set as cited in claim 1 (with appropriate corrections) AND further including the limitation of "wherein the transmitting and receiving circuits include a demodulator, a modulator and (a) wide-band synthesizer which are controlled by a program stored in the software memory part" as claimed in claim 4.

Claim Rejections - 35 USC § 102

19. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> *A person shall be entitled to a patent unless --*
> *(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

20. Claims 1, 3, 6-9, 11-12, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Thompson et al. (U.S. Patent No. 5,465,404/ or "Thompson" hereinafter).

Regarding claim 1, (in further view to the Rejection 112-2nd above and to the best understanding from the Examiner), Thompson discloses a software portable telephone set (Fig. 5 and col. 9/lines 13-30 for a detachable module 100 containing software applications) comprising a detachable transmitting function part (Fig. 10 with a transceiver 104 within a detachable module 100 for providing transmitting function) and transmitting and receiving circuits capable of being reconfigured afresh with software updating, wherein (the) a transmission system is reconfigured afresh in relation to the mounting and demounting of a transmitting function part, i.e., the detachable module 100 comprises transmitting and receiving circuits (as illustrated in Fig. 10 with a transmitter and a receiver; and in Fig. 8 with a wireless radio communication 90 with antenna 92) can be removed or inserted into the body of the cellular phone 50 and by the mounting and demounting of a transmitting function part, software can be updated accordingly to a transmission

system, for instance, to cope with different communication systems (see col. 3/line 52 to col. 4/line 23).

As for claim 3, in further view of claim 1 above, Thompson further discloses "wherein the transmitting and receiving circuits have a software memory part for executing signal conversion processing, programs transferred from a program memory being set in the software memory part", i.e., a resident memory 84 or 284 (same function in both Figs. 7 & 8) contains resident applications and core software programs within communication device 50 (col. 9/lines 30-48 & col. 10/lines 13-25) for executing signal conversion processing, as to handle complex digital information via a modem communication between processor 80 and external sources (col. 10/lines 26-43) as well as handling the encoding or decoding information between processor 80 and resident memory 84 via bus 64 (col. 9/lines 37-48), and programs transferred is addressed in the memory upload and download from application modules 100 and utility programs for operation the processor 80 and the digital signal processor DSP 76 (col. 10/lines 55-65).

As for claim 6, in further view of claim 1 above, Thompson discloses "wherein the transmitting and receiving circuits have a software memory part for executing signal conversion processing, programs transferred from a program memory being set in the software memory part and a plurality of programs for commanding signal conversion processing are stored in the program memory", i.e., a resident memory 84 or 284 (same function in both Figs. 7 & 8) contains resident applications and core software programs within communication device 50 (col. 9/lines 30-48 & col. 10/lines 13-25) for executing signal conversion processing, as to handle complex

digital information via a modem communication between processor 80 and external sources (col. 10/lines 26-43) as well as handling the encoding or decoding information between processor 80 and resident memory 84 via bus 64 (col. 9/lines 37-48), and programs transferred from a program memory (Fig. 8/item 184) is addressed in the memory upload and download from application modules 100 and utility programs for operation the processor 80 and the digital signal processor DSP 76 (col. 10/lines 55-65) and a plurality of programs for commanding signal conversion processing are stored in the program memory (Fig. 10, and col. 14/line 45 to col. 15/line 47 for examples of programs stored in program memory 184 for signal conversion processing to different applications).

As for claim 7, in further view of claim 1 above, Thompson discloses "wherein the transmitting and receiving circuits have a software memory part for executing signal conversion processing, programs transferred from a program memory being set in the software memory part and the software memory provides commands according to a program transferred from the software source memory according to a system switching command", i.e., a resident memory 84 or 284 (same function in both Figs. 7 & 8) contains resident applications and core software programs within communication device 50 (col. 9/lines 30-48 & col. 10/lines 13-25) for executing signal conversion processing, as to handle complex digital information via a modem communication between processor 80 and external sources (col. 10/lines 26-43) as well as handling the encoding or decoding information between processor 80 and resident memory 84 via bus 64 (col. 9/lines 37-48), and programs transferred from a program memory (Fig. 8/item 184) is

addressed in the memory upload and download from application modules 100 and utility programs for operation the processor 80 and the digital signal processor DSP 76 (col. 10/lines 55-65); and Thompson inherently teaches the software memory provides commands according to a program transferred from the software source memory according to a system switching command because different networks provides different protocols are under the control or command of the system facility 22 for switching or change systems, for instance, different modules contains different software source memory according to that system for the portable set to cope with either a PBX system or a wireless cellular system (Fig. 1, col. 16/lines 23-35 and col. 17/line 63 to col. 18/line 17).

Regarding claim 8, in further view of the Claim Objection above, Thompson discloses "a portable telephone set comprising a transmission function unit and/or a receipt function unit, wherein the transmission function unit for performing a specified transmission process is detachably mounted to a body of the portable telephone set and the operation of the transmission function and/or receipt function is determined on the basis of a predetermined software which is selected", i.e., a portable telephone set (Fig. 5 and col. 9/lines 13-30 for a detachable module 100 containing software applications) comprising a detachable transmitting function part and a receive function unit (as illustrated in Fig. 10 with a transmitter and a receiver; and in Fig. 8 with a wireless radio communication 90 with antenna 92) can be removed or inserted into the body of the cellular phone 50 and by the mounting and demounting of a transmitting function part,

software can be updated accordingly to a transmission system, for instance, to cope with different communication systems (see col. 3/line 52 to col. 4/line 23).

As for claim 9, in further view of claim 8 above, Thompson further discloses "wherein the predetermined software is selected from a plurality of softwares stored in a memory in the portable telephone set", i.e., a resident memory in the portable set contains a plurality of predetermined application software and programs (Fig. 7/item 84 or Fig. 8/item 284, and col. 10/lines 23-65).

As for claim 11, in further view of claim 8 with the Objection and the Rejection 112-2nd above, Thompson discloses "wherein one of a plurality of transmission function units each performing a different frequency band operation is detachably mounted to the body of the portable telephone set", i.e., different frequency band operation is programmed in different application modules containing transmission function units, for instance, to cope with a PBX communication system or to a cellular communication system (col. 15/line 15 to col. 16/line 35 for different portions of frequency spectrum are used for different systems and protocols).

As for claim 12, in further view of claim 9 with the Objection and the Rejection 112-2nd above, Thompson discloses "wherein the plurality of softwares are stored in a software source memory, one of the plurality of softwares is selected and down-loaded and the operation of the receipt processing unit is defined by the down-loaded software", i.e., Thompson teaches that a plurality of softwares are stored in a software source memory or a program memory 184 and one of them is selected and downloaded to a resident memory 84 or 284 and then the operation of the

receive processing unit is performed based on the downloaded software or the application program accordingly (col. 14/line 45 to col. 15/line 14).

As for claim 14, in further view of claim 8 with the Objection and the Rejection 112-2nd above, Thompson discloses "wherein the transmission function unit includes a software memory for storing a plurality of softwares each adapted to each transmission function unit, the predetermined software is defined by loading the software from the software memory in the mounted transmission function unit",i.e., Thompson teaches that a plurality of softwares are stored in a software source memory or a program memory 184 and one of them is selected and downloaded to a resident memory 84 or 284 and then the operation of the receive processing unit is performed based on the defined downloaded software or the application program accordingly (col. 14/line 45 to col. 15/line 14).

Claim Rejections - 35 USC § 103

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> *(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

22. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (U.S. Patent No. 5,465,401) in view of Ganesan et al. (U.S. Patent No. 5,812,951/ or "Ganesan" hereinafter).

Regarding claim 2, in further view of claim 1 and the Objection above, Thompson does not disclose wherein the transmitting function is provided by a detachable module for transmitting "a modulated output analog signal" as claimed; however, the technique of modulating a digital signal in order to obtain a modulated output analog signal for transmitting that signal is known in the art. In fact, Ganesan teaches a same technique for use in Ganesan's wireless PCS 20 including software downloading, wherein in the transmitting path, the signal is modulated and provided to a transmit RF section 40 in the form of a modulated output analog signal for transmitting at an antenna 29 (Fig. 2 and col. 1/lines 26-36 for a wireless PCS system, col. 2/lines 54-64 for software downloading; and col. 8/lines 8-25 & col. 9/lines 15-20 for (analog) RF signals at the transmitting path via antenna 29). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Thompson's technique of having a detachable module including the transmitting function with Ganesan's detailed technique of how to transmit analog signals using a modulator in order to provide "a modulated output analog signal" for transmitting signals in communication to the analog system, if any, as preferred.

23. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (U.S. Patent No. 5,465,401) in view of Crnkovic et al. (U.S. Patent No. 5,815,805).

Regarding claim 5 (in further view of claim 1 and the Rejection 112-2nd above) and claim 13, Thompson disclose a detachable module 100 comprising a transceiver 104, but Thompson does not further disclose "wherein the detachable module includes a power amplifier, a transmission signal filter and an isolator" and "wherein the transmission function unit includes an amplifier, a transmission signal filter and an isolator"; however, in a transmitting section of a portable telephone set, the transmitting section is known to include a power amplifier, a transmission signal filter and an isolator. In fact, Crnkovic teaches a same technique to include a power amplifier 113, a transmission signal filter 112 and an isolator 115 in transmitter section 101 (Fig. 1, and col. 7/line 63 to col. 8/line 14 as attenuator 115 is a TDK isolator). Therefore, it would have been obvious to modify Thompson's transceiver circuit with Crnkovic's detailed components of a transmitter section including a power amplifier, a transmission signal filter and an isolator within the detachable module as means for matching or replacing appropriate transmitting section parts accordingly due to power adjustments to different transmission systems as suggested by Crnkovic with the benefits of including a transmit filter, a power amplifier and an isolator or attenuator (col. 1/lines 25-50, col. 6/line 66 to col. 7/line 35 , and col. 7/line 63 to col. 8/line 14).

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Ogino (US Patent 6,377,785 B1) discloses a portable telephone set and communication system.

Hikita et al. (US Patent 4,792,939) disclose duplex radio communciation transceiver.

Bottoms et al. (US Patent 5,537,436) disclose simultaneous analog and digital communciation applications.

Alanara et al (US Patent 6,292,668 B1) disclose communication network terminal supporting a plurality of applications.

25. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II,

2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (703) 308-5860. The examiner can normally be reached on Monday-Friday from 9:00 AM to 6:00 PM, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

TONY T. NGUYEN
PATENT EXAMINER

Tony T. Nguyen
Art Unit 2685
May 01, 2003